

Modulating rotary actuator
for 2-way and 3-way ball valves

- Torque 2 Nm
- Nominal voltage AC/DC 24 V
- Control: modulating DC 2 ... 10 V
- Position feedback DC 2 ... 10 V
- k_{vs} setting (angle of rotation limiting)



Technical data


Electrical data	Nominal voltage	AC 24 V, 50/60 Hz / DC 24 V
	Nominal voltage range	AC 19.2 ... 28.8 V / DC 21.6 ... 28.8 V
	Power consumption	In operation 1 W @ nominal torque
		At rest 0.5 W
		For wire sizing 2 VA
	Connection	Cable 1 m, 4 x 0.75 mm ²
Functional data	Parallel operation	Possible, note the performance data
	Torque (nominal torque)	Min. 2 Nm @ nominal voltage
	Control	Control signal Y
		Operating range DC 2 ... 10 V
	Position feedback (measuring voltage U)	DC 2 ... 10 V, max. 1 mA
	Position accuracy	±5%
	Manual override	Gear disengagement with magnet
	k_{vs} setting	Angle of rotation limiting Starting at 90°↯ (A – AB = 100%) in 2.5°↯ steps Scale: 25 ... 100% of k_{vs}
	Running time	75 s / 90°↯
	Sound power level	Max. 35 dB (A) (without ball valve)
	Position indication	Mechanical, pluggable
Safety	Protection class	III Safety extra-low voltage / UL Class 2 Supply
	Degree of protection	IP54 in any mounting position NEMA 2, UL Enclosure Type 2
	EMC	CE according to 2004/108/EC
	Certification	cULus according to UL 60730-1A and UL 60730-2-14 and CAN/CSA E60730-1:02 Certified to IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1
	Rated impulse voltage	0.8 kV
	Control pollution degree	3
	Ambient temperature	–30 ... +50 °C
	Medium temperature	+5 ... +80 °C in the ball valve
	Non-operating temperature	–40 ... +80 °C
Dimensions / Weight	Ambient humidity	95% r.h., non-condensating
	Maintenance	Maintenance-free
	Dimensions	See «Dimensions» on page 2
	Weight	Approx. 220 g (without ball valve)

Safety notes



- The actuator has been designed for use in stationary heating, ventilation and air conditioning systems and is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- It may only be installed by suitably trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.
- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

Product features

Mode of operation	The actuator is controlled with a standard modulating signal DC 2 ... 10 V and travels to the position defined by the control signal. Measuring voltage U serves for the electrical display of the valve position 0 ... 100% and as slave control signal for other actuators.
Simple direct mounting	Straightforward direct mounting on the ball valve with only one screw. The mounting position in relation to the ball valve can be selected in 90° steps.
Manual override	Manual override with magnet possible (the gear is disengaged as long as the magnet adheres to the symbol ). The magnet for gearing latch is included as an accessory in the scope of supply.
Adjustable angle of rotation	The rotary actuator can be adjusted beginning with 90° (A – AB = 100%) in 2.5° steps. The scale corresponds to 25 ... 100% of the k_{vs} value.
High functional reliability	The actuator is overload-proof, requires no limit switches in intermediate positions and automatically stops when the end stop is reached (at rest).

Accessories

	Description
Mechanical accessories	Magnet for gearing latch Z-MA, packaging unit 20 pcs. (1 pc. in the scope of delivery of the actuator)

Electrical installation

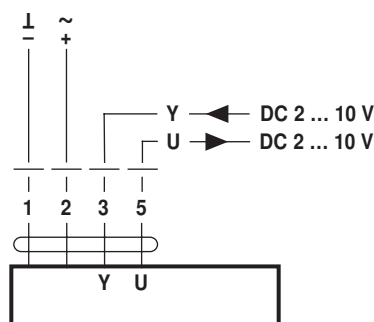
Wiring diagrams

Notes

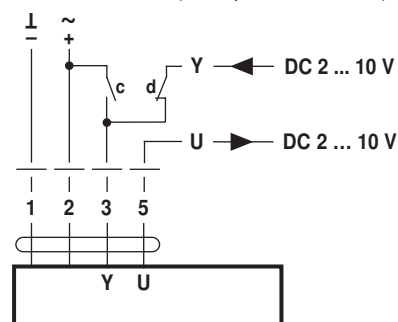
- Connect via safety isolation transformer.
- Parallel connection of other actuators possible.
Note performance data for supply.









Standard



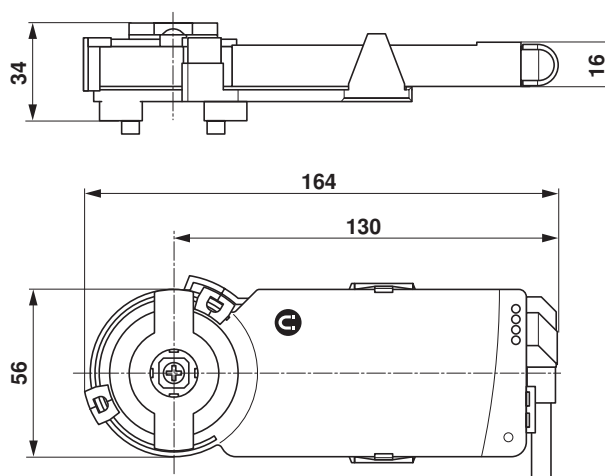
Override control (Frost protection circuit)



c	d	Actuator	Valve
		Y1	A – AB = 100%
		Y2	A – AB = 0%
		Modulating operation	

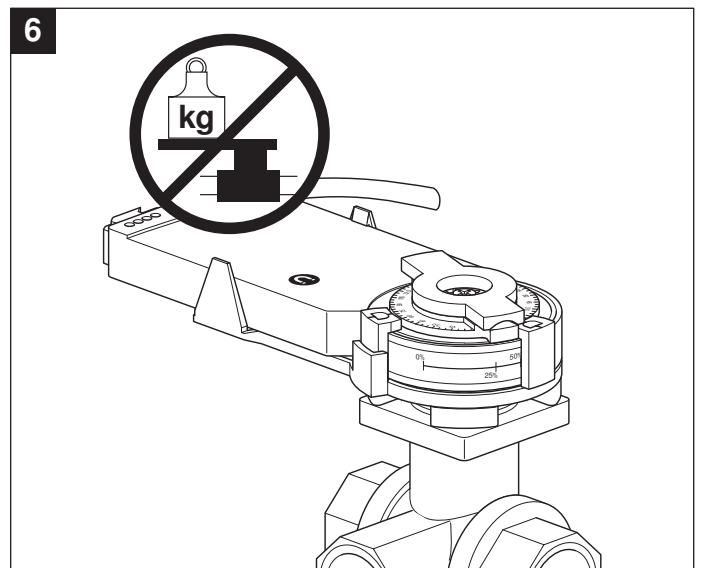
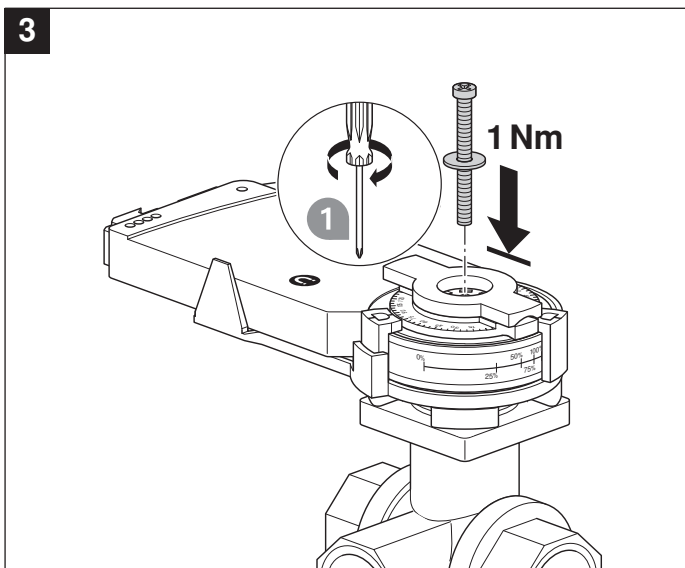
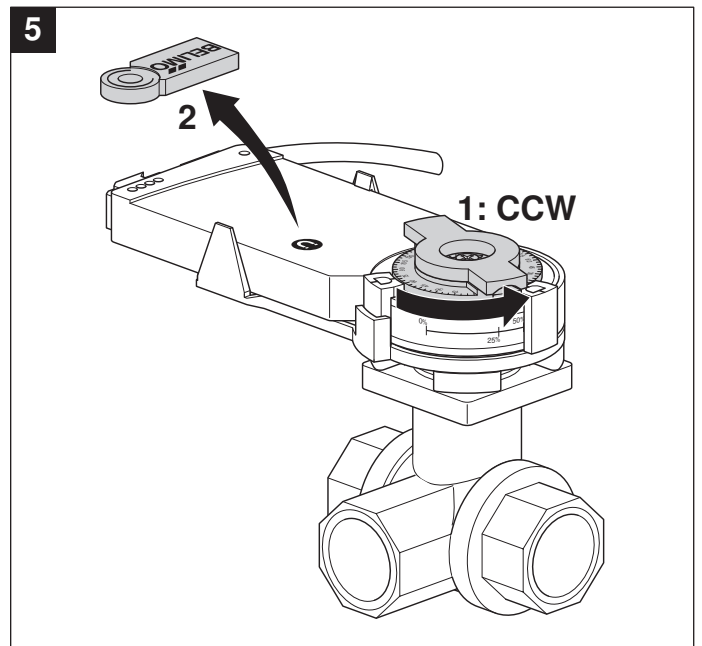
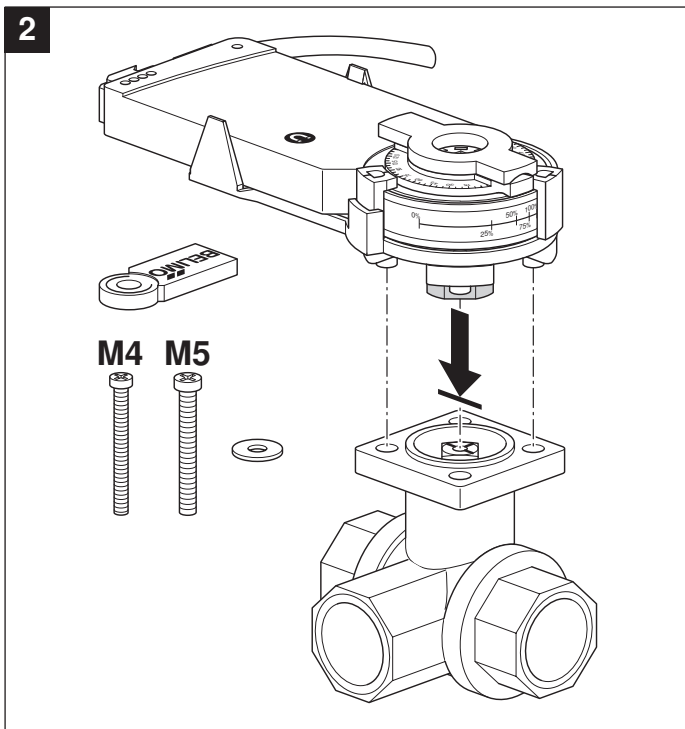
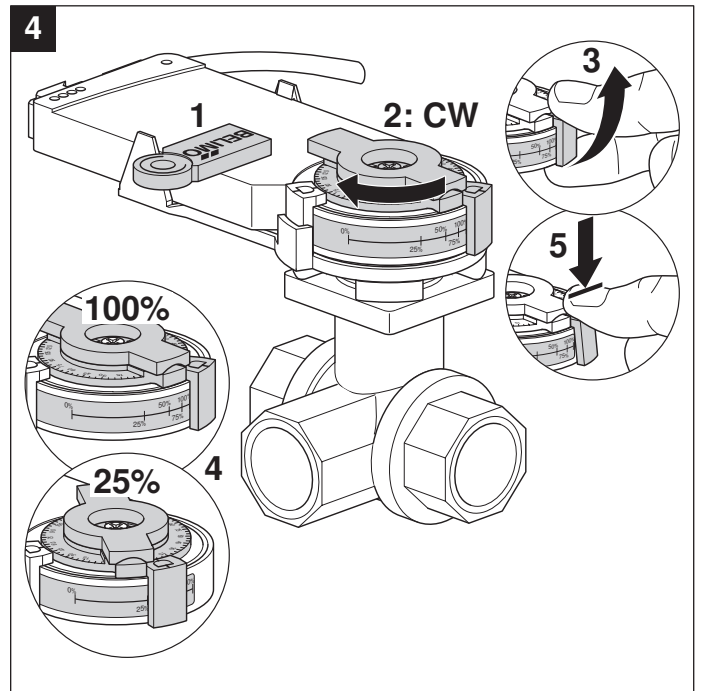
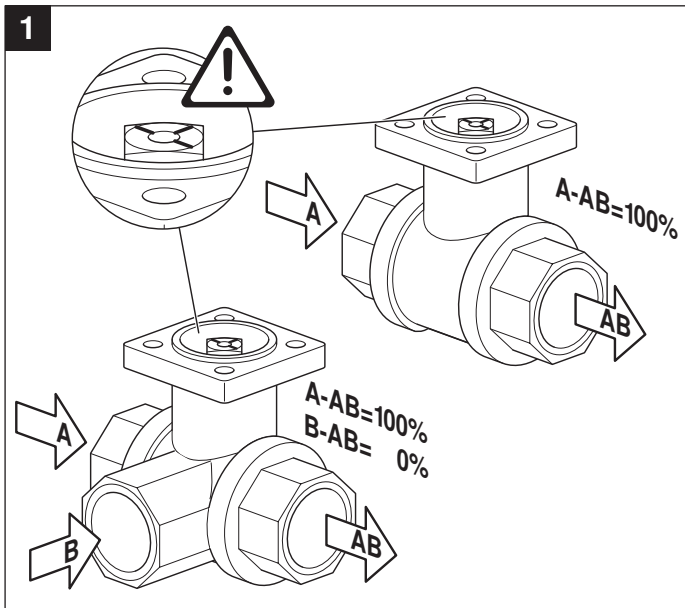
Dimensions [mm]

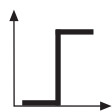
Dimensional drawings



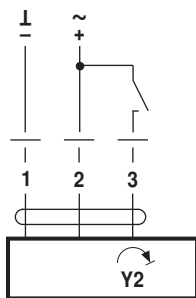
Further documentation

- Complete overview «The complete range of water solutions»
- Data sheets for ball valves
- Installation instructions for actuators and/or ball valves, respectively
- Notes for project planning (hydraulic characteristic curves and circuits, installation regulations, commissioning, maintenance, etc.)

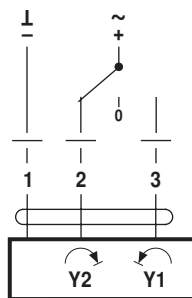




AC 24 V / DC 24 V

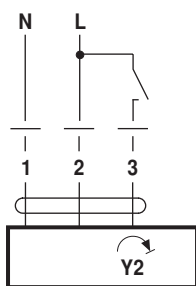


KR24

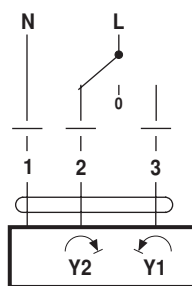


KR24

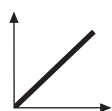
AC 100 ... 240 V ⚠



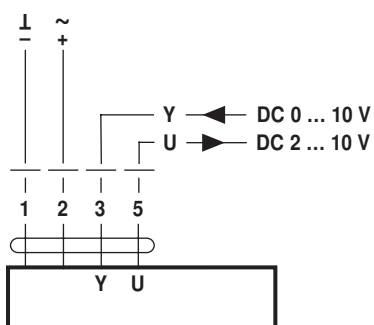
KR230



KR230



AC 24 V / DC 24 V



KR24-SR